

## CLAIMS

We claim:

1. Method for processing a client session request,  
comprising the steps of:
  - negotiating environment parameters for establishing a  
connection-oriented connection with said client;
  - inviting said client to submit user variables;
  - responsive to receiving a user variable requesting a  
custom confirmation record, sending to said client a  
confirmation record and custom record data.
2. The method of claim 1, said negotiating, inviting, and  
sending steps executing within the application layer of a  
TCP/IP protocol stack.

1 3. The method of claim 1, further comprising the step  
2 responsive to a user variable requesting a confirmation  
3 record, sending to said client a confirmation record without  
4 said custom record data.

1 4. The method of claim 1, said confirmation record  
2 including a field defining a pass through data length, said  
3 pass through data including said confirmation record and  
4 said custom record data.

1 5. The method of claim 1, further comprising the step of  
2 appending said custom record data to said confirmation  
3 record.

1 6. The method of claim 1, said request being for a default  
2 custom confirmation record, and further comprising the step  
3 of sending to said client default data in said custom record  
4 data.

1 7. The method of claim 1, said request being for a defined  
2 custom confirmation record, said request including a list of  
3 one or more predefined information items, further comprising  
4 the step of sending to said client defined data in said  
5 custom record data.

1 8. The method of claim 7, said sending step including  
2 executing a customer defined exit program on said list to  
3 generate said defined data.

1 9. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying a  
3 device allocated by a host server.

1 10. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying a  
3 terminal or printer device allocated by a host server.

1 11. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying an  
3 associated device linked to a current session by a host.

1 12. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying a  
3 physical location for receiving output.

1 13. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying  
3 system security level and password encryption requirements.

1 14. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying  
3 another device for retrying a rejected request.

1 15. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying a  
3 reason for a failed auto-signon request.

1 16. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying a  
3 reason for denial of session connection request upon system  
4 overload and redirection to an alternate time or host.

1 17. The method of claim 4, further comprising the step of  
2 providing in said custom record data indicia identifying  
3 custom information for interpretation by said client.

1 18. A client/server system, comprising:  
2 a custom confirmation record;  
3 a user exit program running on said server;  
4 said client operating in conjunction with said user  
5 exit program for requesting said custom confirmation  
6 record

1 19. The system of claim 18, said client being a Telnet  
2 client.

1 20. The system of claim 18, further comprising:  
2 said client being selectively operable for negotiating  
3 a send-custom-confirmation-record with a 'yes', 'no' or  
4 defined data value; and  
5 said user exit interpret said data value and sending  
6 default or defined information back to said client in  
7 said custom confirmation record.

1 21. The system of claim 20, said custom confirmation record  
2 containing diagnostic information provided by said server  
3 along with custom information provided by said user exit  
4 program.

1 22. The system of claim 21, said custom information being  
2 provided by user exit programs executing in said server and  
3 said client.

1 23. A method for operating a client to establish a network  
2 connection with a server, comprising the steps of:

3 negotiating environment parameters for establishing a  
4 connection-oriented connection with said server;

5 said parameters including a request for said server to  
6 provide a custom confirmation record; and

7 responsive to said request, receiving said confirmation  
8 record.

1 24. The method of claim 23, said custom confirmation record  
2 including return code, system name, device name and custom  
3 data.

1 25. The method of claim 24, further comprising the steps  
2 of:

3 operating said server to request a custom information  
4 record from said client.

1 26. The method of claim 25, said request comprising an  
2 invitation to said client from said server to respond with  
3 all environment variables.

1 27. The method of claim 26, said client responding to said  
2 invitation by returning a custom information record as part  
3 of said environment variables.

1 28. The method of claim 27, said client responding to said  
2 invitation with a request that said server return to said  
3 client a custom confirmation record.

1 29. The method of claim 28, further the steps of  
  
2 operating an exit program to interpret the value in  
3 said custom information record to selectively return a  
4 custom confirmation record response.

1 30. The method of claim 28, further comprising the steps of  
2 specifying in said custom confirmation record a list of  
3 custom fields to be returned by said server.

1 31. The method of claim 28, further comprising the steps of  
2 specifying in said custom confirmation record unstructured  
3 data for subsequent parsing and processing by said server,  
4 an exit program, or an independent job.

1 32. Method for operating a client to establish a network  
2 connection with a server, comprising the steps of:

3 negotiating environment parameters for establishing a  
4 connection-oriented connection with said server;

5 receiving an invitation to submit user variables;

6 responsive to sending to said server a user variable  
7 requesting a custom confirmation record, receiving from  
8 said server a confirmation record and custom record  
9 data.



1 33. The method of claim 32, said negotiating, inviting, and  
2 sending steps executing within the application layer of a  
3 TCP/IP protocol stack.

1 34. The method of claim 32, further comprising the step  
2 responsive to said invitation to submit user variables,  
3 requesting a confirmation record, and responsive thereto  
4 receiving from said server a confirmation record without  
5 said custom record data.

1 35. The method of claim 32, said confirmation record  
2 including a field defining a pass through data length, said  
3 pass through data including said confirmation record and  
4 said custom record data.

1 36. The method of claim 32, further comprising the step of  
2 receiving said custom record data appended to said  
3 confirmation record.

1 37. The method of claim 32, said request being for a  
2 default custom confirmation record, and further comprising  
3 the step of receiving from said server, default data in said  
4 custom record data.

1 38. The method of claim 32, said request being for a  
2 defined custom confirmation record, said request including a  
3 list of one or more predefined information items, further  
4 comprising the step of receiving from said server, client  
5 defined data in said custom record data.

1 39. The method of claim 38, further including the step of  
2 providing to said server a customer defined exit program for  
3 parsing said list to generate said defined data.

1 40. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying a  
3 device allocated by a host server.

1 41. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying a  
3 terminal or printer device allocated by a host server.

1 42. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying an  
3 associated device linked to a current session by a host.

1 43. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying a  
3 physical location for receiving output.

1 44. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying  
3 system security level and password encryption requirements.

1 45. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying  
3 another device for retrying a rejected request.

1 46. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying a  
3 reason for a failed auto-signon request.

1 47. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying a  
3 reason for denial of session connection request upon system  
4 overload and redirection to an alternate time or host.

1 48. The method of claim 35, further comprising the step of  
2 receiving in said custom record data indicia identifying  
3 custom information for interpretation by said client.

1 49. A client system for establishing a network connection  
2 with a server, comprising:

3 a first logic element for negotiating environment  
4 parameters for establishing a connection-oriented  
5 connection with said server;

6 said parameters including a request for said server to  
7 provide a custom confirmation record; and

8 a second logic element responsive to said request, for  
9 receiving said confirmation record.

1 50. The system of claim 49, said custom confirmation record  
2 including return code, system name, device name and custom  
3 data.

1 51. The system of claim 50, further comprising:

2 a third logic element for operating said server to  
3 request a custom information record from said client.

4 52. The system of claim 51, said request comprising an  
5 invitation to said client from said server to respond with  
6 all environment variables.

1 53. The system of claim 52, said client further comprising  
2 a fourth logic element for responding to said invitation by  
3 returning a custom information record as part of said  
4 environment variables.

1 54. The system of claim 53, said client further comprising  
2 a fifth logic element for responding to said invitation with  
3 a request that said server return to said client a custom  
4 confirmation record.

1 55. The system of claim 54, said server further comprising  
2 an exit program for interpreting the value in said custom  
3 information record to selectively return a custom  
4 confirmation record response.

1 56. The system of claim 54, further comprising a logic  
2 element for specifying a list of custom fields to be  
3 returned by said server in said custom confirmation record.

1 57. The system of claim 54, further comprising a logic  
2 element for specifying in said custom confirmation record  
3 unstructured data for subsequent parsing and processing by  
4 said server, an exit program, or an independent job.

1 58. System for processing a client session request,  
2 comprising:

3 a logic element for negotiating environment parameters  
4 for establishing a connection-oriented connection with  
5 said client and inviting said client to submit user  
6 variables; and

7 an exit program responsive to receiving a user variable  
8 requesting a custom confirmation record for sending to  
9 said client a confirmation record and custom record  
10 data.

1 59. The system of claim 58, further comprising a TCP/IP  
2 protocol stack including within an application layer said  
3 exit program generating said custom record data.

1 60. The system of claim 58, said logic element further  
2 operable responsive to a user variable requesting a  
3 confirmation record for sending to said client a  
4 confirmation record without said custom record data.

1 61. The system of claim 58, said confirmation record  
2 including a field defining a pass through data length, said  
3 pass through data including said confirmation record and  
4 said custom record data.

1 62. The system of claim 58, said logic element further  
2 operable for appending said custom record data to said  
3 confirmation record.

1 63. System for operating a client to establish a network  
2 connection with a server, comprising:

3 a first logic element for negotiating environment  
4 parameters for establishing a connection-oriented  
5 connection with said server and for receiving an  
6 invitation to submit user variables;

7 a second logic element responsive to sending to said  
8 server a user variable requesting a custom confirmation

9 record for receiving from said server a confirmation  
10 record and custom record data.

1 64. The system of claim 63, further comprising a TCP/IP  
2 protocol stack including an application layer within which  
3 said logic elements execute.

1 65. The system of claim 63, further comprising the step  
2 responsive to said invitation to submit user variables,  
3 requesting a confirmation record, and responsive thereto  
4 receiving from said server a confirmation record without  
5 said custom record data.

1 66. The system of claim 63, said confirmation record  
2 including a field defining a pass through data length, said  
3 pass through data including said confirmation record and  
4 said custom record data.

1 67. The system of claim 63, said second logic element  
2 further responsive for receiving said custom record data  
3 appended to said confirmation record.



1 68. The system of claim 63, said request being for a  
2 default custom confirmation record, and said second logic  
3 element further operable for receiving from said server  
4 default data in said custom record data.

1 69. The system of claim 63, said request being for a  
2 defined custom confirmation record, said request including a  
3 list of one or more predefined information items, said  
4 second logic element further operable for receiving from  
5 said server client defined data in said custom record data.

1 70. The system of claim 69, further including a logic  
2 element for providing to said server a customer defined exit  
3 program for parsing said list to generate said defined data.

1 71. A program storage device readable by a machine,  
2 tangibly embodying a program of instructions executable by a  
3 machine to perform method steps for processing a client  
4 session request, said method steps comprising:

5 negotiating environment parameters for establishing a  
6 connection-oriented connection with said client;

7 inviting said client to submit user variables;

8 responsive to receiving a user variable requesting a  
9 custom confirmation record, sending to said client a  
10 confirmation record and custom record data.

1 72. The program storage device of claim 71, said  
2 negotiating, inviting, and sending steps executing within  
3 the application layer of a TCP/IP protocol stack.

1 73. The program storage device of claim 71, said method  
2 steps further comprising, responsive to a user variable  
3 requesting a confirmation record, sending to said client a  
4 confirmation record without said custom record data.

1 74. The program storage device of claim 71, said  
2 confirmation record including a field defining a pass  
3 through data length, said pass through data including said  
4 confirmation record and said custom record data.

1 75. The program storage device of claim 71, said method  
2 steps further comprising the step of appending said custom  
3 record data to said confirmation record.

1 76. The program storage device of claim 71, said request  
2 being for a default custom confirmation record, and said  
3 method steps further comprising the step of sending to said  
4 client default data in said custom record data.

1 77. The program storage device of claim 71, said request  
2 being for a defined custom confirmation record, said request  
3 including a list of one or more predefined information  
4 items, and said method steps further comprising the step of  
5 sending to said client defined data in said custom record  
6 data.

1 78. The program storage device of claim 77, said sending  
2 step including executing a customer defined exit program on  
3 said list to generate said defined data.

1 79. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying a device allocated by  
4 a host server.

1 80. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying a terminal or printer  
4 device allocated by a host server.

1 81. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying an associated device  
4 linked to a current session by a host.

1 82. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying a physical location  
4 for receiving output.

1 83. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying system security level  
4 and password encryption requirements.

1 84. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying another device for  
4 retrying a rejected request.

1 85. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying a reason for a failed  
4 auto-signon request.

1 86. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying a reason for denial  
4 of session connection request upon system overload and  
5 redirection to an alternate time or host.

1 87. The program storage device of claim 74, said method  
2 steps further comprising the step of providing in said  
3 custom record data indicia identifying custom information  
4 for interpretation by said client.

1 88. A program storage device readable by a machine,  
2 tangibly embodying a program of instructions executable by a  
3 machine to perform method steps for operating a client to  
4 establish a network connection with a server, said method  
5 steps comprising:

6 negotiating environment parameters for establishing a

7 connection-oriented connection with said server;  
8 receiving an invitation to submit user variables;  
9 responsive to sending to said server a user variable  
10 requesting a custom confirmation record, receiving from  
11 said server a confirmation record and custom record  
12 data.

1 89. The program storage device of claim 88, said  
2 negotiating, inviting, and sending steps executing within  
3 the application layer of a TCP/IP protocol stack.

1 90. The program storage device of claim 88, said method  
2 steps further comprising the step, responsive to said  
3 invitation to submit user variables, of requesting a  
4 confirmation record, and responsive thereto receiving from  
5 said server a confirmation record without said custom record  
6 data.

1 91. The program storage device of claim 88, said  
2 confirmation record including a field defining a pass  
3 through data length, said pass through data including said  
4 confirmation record and said custom record data.

1 92. The program storage device of claim 88, said method  
2 steps further comprising the step of receiving said custom  
3 record data appended to said confirmation record.

1 93. The program storage device of claim 88, said request  
2 being for a default custom confirmation record, and said  
3 method steps further comprising the step of receiving from  
4 said server default data in said custom record data.

1 94. The program storage device of claim 88, said request  
2 being for a defined custom confirmation record, said request  
3 including a list of one or more predefined information  
4 items, said method steps further comprising the step of  
5 receiving from said server client defined data in said  
6 custom record data.

1 95. The method of claim 94, further including the step of  
2 providing to said server a customer defined exit program for  
3 parsing said list to generate said defined data.

1 96. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying a device allocated by  
4 a host server.

1 97. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying a terminal or printer  
4 device allocated by a host server.

1 98. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying an associated device  
4 linked to a current session by a host.

1 99. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying a physical location  
4 for receiving output.

1 100. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying system security level  
4 and password encryption requirements.



1 101. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying another device for  
4 retrying a rejected request.

1 102. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying a reason for a failed  
4 auto-signon request.

1 103. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying a reason for denial  
4 of session connection request upon system overload and  
5 redirection to an alternate time or host.

1 104. The program storage device of claim 91, said method  
2 steps further comprising the step of receiving in said  
3 custom record data indicia identifying custom information  
4 for interpretation by said client.

1 105. A computer program product or computer program element  
2 for operating a server in a network according to method  
3 steps comprising:

4 negotiating environment parameters for establishing a  
5 connection-oriented connection with a client;

6 inviting said client to submit user variables;

7 responsive to receiving a user variable requesting a  
8 custom confirmation record, sending to said client a  
9 confirmation record and custom record data.

1 106. A computer program product or computer program element  
2 for operating a client in a network according to method  
3 steps comprising:

4 negotiating environment parameters for establishing a  
5 connection-oriented connection with said server;

6 receiving an invitation to submit user variables;

7 responsive to sending to said server a user variable  
8 requesting a custom confirmation record, receiving from

9

said server a confirmation record and custom record data.

Time	Latitude	Longitude	Altitude	Temperature	Humidity	Wind	Clouds	Pressure	Remarks
0000	34° 15' N	118° 15' E	1000	15.0	85	10	0	1013.2	Clear
0100	34° 15' N	118° 15' E	1000	14.5	80	10	0	1013.5	Clear
0200	34° 15' N	118° 15' E	1000	14.0	75	10	0	1013.8	Clear
0300	34° 15' N	118° 15' E	1000	13.5	70	10	0	1014.0	Clear
0400	34° 15' N	118° 15' E	1000	13.0	65	10	0	1014.2	Clear
0500	34° 15' N	118° 15' E	1000	12.5	60	10	0	1014.5	Clear
0600	34° 15' N	118° 15' E	1000	12.0	55	10	0	1014.8	Clear
0700	34° 15' N	118° 15' E	1000	11.5	50	10	0	1015.0	Clear
0800	34° 15' N	118° 15' E	1000	11.0	45	10	0	1015.2	Clear
0900	34° 15' N	118° 15' E	1000	10.5	40	10	0	1015.5	Clear
1000	34° 15' N	118° 15' E	1000	10.0	35	10	0	1015.8	Clear
1100	34° 15' N	118° 15' E	1000	9.5	30	10	0	1016.0	Clear
1200	34° 15' N	118° 15' E	1000	9.0	25	10	0	1016.2	Clear
1300	34° 15' N	118° 15' E	1000	8.5	20	10	0	1016.5	Clear
1400	34° 15' N	118° 15' E	1000	8.0	15	10	0	1016.8	Clear
1500	34° 15' N	118° 15' E	1000	7.5	10	10	0	1017.0	Clear
1600	34° 15' N	118° 15' E	1000	7.0	5	10	0	1017.2	Clear
1700	34° 15' N	118° 15' E	1000	6.5	0	10	0	1017.5	Clear
1800	34° 15' N	118° 15' E	1000	6.0	0	10	0	1017.8	Clear
1900	34° 15' N	118° 15' E	1000	5.5	0	10	0	1018.0	Clear
2000	34° 15' N	118° 15' E	1000	5.0	0	10	0	1018.2	Clear
2100	34° 15' N	118° 15' E	1000	4.5	0	10	0	1018.5	Clear
2200	34° 15' N	118° 15' E	1000	4.0	0	10	0	1018.8	Clear
2300	34° 15' N	118° 15' E	1000	3.5	0	10	0	1019.0	Clear